8. Charging

8.1 Charging During the Season

The Base Station is the primary charging source when Robomow is docked and will maintain the optimal battery charge while awaiting departure.

8.2 Charging Out of Season

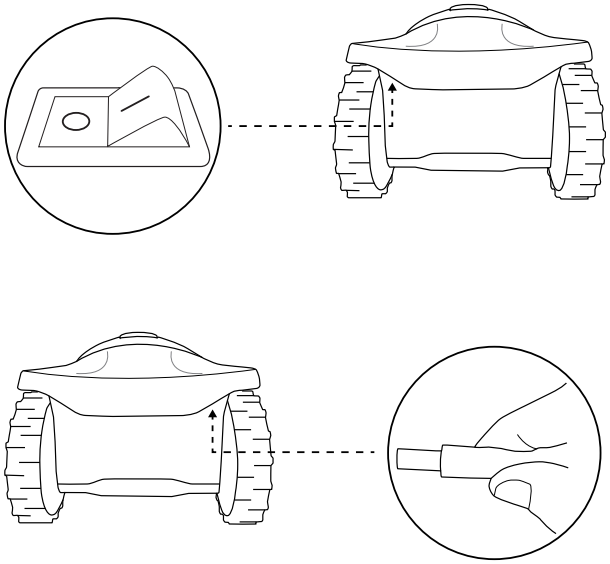
During out of season months, such as winter, it is required to:

- Fully charge the battery in the Base Station till the Battery indicator is green and lit constantly.

  LED indicators for charging:

  - Red is lit constantly – Charge the battery.
  - Green is blinking – During battery charging.
  - Green is lit constantly – Battery is fully charged.
- Remove Robomow from its Base Station. Turn the Safety Switch off and store the mower in a room temperature.
- If the mower is stored for more than 3 months, it is required to recharge the battery every 3 months till the Battery indicator shows it is fully charged.
- The charging can be done in one of the following options:

  1. Place the mower in the Base Station for charging.
  2. Connect Robomow directly to the Power Box as follows:
     - Disconnect the DC Cable coming from the Power Box to the 15m Extension Cable and connect it to the rear side of the mower as . in the figure to the right.
- Once the season starts, just place Robomow in its Base Station to begin automatic operation.



9. Troubleshooting and User Messages

9.1 General Error Codes

Robomow continuously monitors its operation. It produces error codes to assist you in running it smoothly.

A sticker containing the most common error codes is provided in the box. You can place it on the mower for your convenience.

E9* (See Troubleshooting in Manual) represents stops and error that are not very common, and thus they are not shown in the above Error Code Table. If E9 is displayed, press the RIGHT arrow to receive the Error Code reason, for which the mower has stopped and refer to the User Manual for more details.

- Usually, if the mower stops, an error code is displayed. This display stays on for 5 minutes. If you arrive later than those 5 minutes, the display will be blank.
- To wake Robomow up and see the last error

Rombow Error Codes Table	
E 1	Stuck in Place
E 2	Mower is Outside
E 3	No Wire Signal
E 4	Check Power
E 5	Check Blade / Cutting Height
E 6	Check Drive
E 7	Front Wheel Problem
E 8	Decrease Inactive Time
E 9*	See Troubleshooting in Manual
E5XX	Call Support

code displayed prior to stopping, press the OK button on the mower.

The following table displays all Error Codes and gives possible causes and corrective actions:

Display	Message	Probable Cause/Event	Corrective Actions
E1	Stuck in Place	- Robomow got stuck in place. It cannot continue driving. - Drive wheel motors have been working under a severe load. - Robomow has difficulty turning in place because the front wheel is blocked by a ditch or non-level ground.	- Remove the mower away from this particular location and restart operation. - Rectify the reason for it getting stuck. - Check the ground around the mower for ditches or non-level ground. Fill with dirt and level off. - Check if the drive wheels are free to rotate and nothing is blocking them. - Verify that the cutting height is not set too low for the grass condition - increase the cutting height if needed.
E2	The mower is Outside	- The Perimeter Wire is too close to the edge of the lawn. - The Perimeter Wire has been laid the wrong way around a perimeter island. - The lawn slope is too steep along the edge. - Robomow does not succeed to turn in place at the edge and it l causing the mower to slip out of the designated area. - Automatic operation is initiated while the robot is placed out of the Perimeter Wire loop.	- Check that the Perimeter Wire is not too close to the edge - remove the wire towards the inner side of the lawn. - Confirm that the Perimeter Wire has been laid according to the instructions in the Manual. - Do not include areas with very steep slopes. - Verify that the cutting height is not set too low - Increase the cutting height. - Place the mower inside the lawn and renew the operation.
E3	No Wire Signal	- Power Box/Perimeter Switch is not turned on or not connected - The Perimeter Wire is not connected to the Base Station/ Perimeter Switch. - The Perimeter Wire is cut.	- Make sure the Base Station is connected to the mains supply. - Disconnect the Power Box from the mains power and reconnect after 10 seconds. - Check that the low voltage cable between the Power Box and the Base Station is connected. - Check the LED indications on the Power Box. - Check the connection of the Perimeter Wire to the Base Station / Perimeter Switch. - Check the installation for cut wire. Repair broken cable with the waterproofed connector supplied in the box.
E4	Check Power	- Power Box is not plugged in properly into the power outlet. - No power at the power outlet or the main power is shut off. - The mower or Base Station contacts are dirty. - Charging is not detected, although there is a physical contact between the mower and the Base Station contacts.	- Confirm Power Box is plugged into the power outlet. - Turn power on to the power outlet. - Check the power outlet using another appliance. - Clean the contacts with a brush or piece of cloth. - Confirm a good connection of the Power Box to the Base Station.
E5	Check Blade / Cutting Height	- Mowing motor has faced over-current conditions for too long as a result of high grass or an obstacle that is stuck or wrapped around the blade. - Something is preventing a blade from rotating freely (Accumulated grass clippings under the mowing deck; rope or similar object wrapped around mowing blade).	- CAUTION – Switch off the Safety Switch before checking the blade. - Inspect blade for foreign material or debris preventing rotation. - Clean out accumulated grass clippings using a wooden stick.

Display	Message	Probable Cause/Event	Corrective Actions
E 6	Check Drive	- Grass or other object has wrapped around the drive wheel. - The drive motors have been working under severe load for too long.	- Check the drive wheels and remove the grass or other objects.
E 7	Front Wheel Problem	- The Front Wheel has left the ground for too long during operation.	- If Robomow has driven onto an obstacle, Switch off the Safety Switch, raising the front end: Remove or exclude the object from the mowing area. - If Robomow is being used on a slope too steep for safe mowing, exclude this from the mowing area. - If high grass is preventing the front wheel from fully turning on the ground, raise the cutting height. - If the ground contains large holes or indentations where the front wheel can drop into when passing across, fill these areas with dirt and level off.
E 8	Decrease Inactive Time	- Too many Inactive Days and/or Hours have been set for your lawn area.	- Decrease the number of Inactive Days and/ or the number of Inactive Hours to allow Robomow to complete mowing your lawn.
E 9	See Troubleshooting in Manual	- E 9 is displayed for all other messages that are not listed in the above table.	- Press the 'Right arrow' button to receive the stop reason number and refer to the next table for more details about the stop reason, causes, and actions.

9.2 Detailed Error Codes

If the above table (Section 9.1) does not give enough information to help solve the problem, then press the RIGHT arrow while the error code is displayed in order to receive a number that gives more details about the problem and refer to the table below:

Display	Message	Probable Cause/Event	Corrective Actions
0010	Mow Overheat	- The mowing motor has been working under a severe load for too long.	- No need for action – Robomow will renew automatically the operation after the mowing motor will cool down.
0011	Drive Overheat	- The drive motors have been working under a severe load for too long.	- No need to do anything. - Robomow will renew the operation automatically as soon as the drive motor will cool down.
0012	No wire signal	- See E3 in the above table	
0014	Front wheel problem	- See E7 in the above table	
0015	Button pressed	- One of the operating panel buttons is constantly pressed.	- Press 'OK' to confirm the message and continue operation. This message is displayed to inform only.
0016	Low temperature	- Mower does not depart automatically from the Base Station when the ambiance temperature is lower than 5ºC (41ºF). - Information - When the temperature is below 5ºC (41ºF) the grass does not grow or grows very slowly. However Manual Depart is enabled.	- No need to do anything. - Robomow will renew the operation automatically as soon as the ambiance temperature will rise above 5ºC (41ºF).
0020	Rain detected	- The operation is delayed as Robomow detects rain.	- No need for action. - The message is displayed until Robomow will not detect rain and then will start mowing.

Display	Message	Probable Cause/Event	Corrective Actions
0021	Check mowing height	- Mowing motor has faced over-current conditions for too long as a result of high grass or an obstacle that is stuck or wrapped around the blade. - Something is preventing a blade from rotating freely. - Severe grass accumulation under the mowing deck, rope, or similar object is wrapped around mowing blade.	- CAUTION – Switch Off the Safety Switch before checking the blade. - Inspect the blade for foreign material or debris preventing rotation. - Clean out accumulated grass clippings using a wooden stick.
0022	Check mowing motor	- Mowing motor has faced over-current for too long in the Base Station before starting the operation.	- CAUTION – Switch Off the Safety Switch before checking the blade. - Remove the mower from the Base Station. Inspect the blade for foreign material or debris preventing rotation.
0023	Check power	- See E4 in the above table	
0026	Base problem	- Robomow fails to enter the Base Station several consecutive times.	- Adjust the Base Station position. - Clean the contacts with a brush or piece of cloth.
0027	Start Elsewhere	- Drive wheel motors have been working under severe load during automatic or manual operation.	- Check to insure the mower is not stuck, causing the drive wheels to slip. - Check the ground around the mower for holes or indentations. Fill with dirt and level off. - Check if the drive wheels are free to rotate and nothing is blocking them. - Remove the mower away from this particular location and restart operation.
0028	Cross Outside	- The Perimeter Wire is too close to the edge. - The lawn slope is too big. - Robomow does not succeed to turn in place at the edge and it causes the mower to slip out of the designated area. - Robomow has slipped out of the Perimeter Wire lope because of sloping area or wet grass.	- Remove the wire towards the inner part of the lawn. - Do not include this area because of its steep slopes. - Fill holes and pits in the ground. - Increase the cutting height.
0030	Start Inside	- Automatic operation is initiated while the robot is placed out of the Perimeter Wire loop.	- Place the mower inside the lawn and renew the operation.
0031	Stuck in place	- See E1 in the above table	
0060	Check Intensity	- The Intensity you have set is too high for your lawn area.	- Decrease the Intensity you have set for the zone(s) in your lawn.
0061	Decrease Inactive Time	- See E8 in the above table	

9.3 User Messages

The next table gives information about User Messages that can be displayed on the mower:

Display	Message / Description	Action Required
BATT	Recharge Battery. Low battery voltage.	Recharge the Battery.
U001	Test Base Station position. Displayed during the One-Time Setup.	Refer to section 5.2.4 in the User Manual.
U002	Peg Base Station. Displayed during the One-Time Setup.	Refer to section 5.2.4 in the User Manual.
U003	Test wire position. Displayed during the One-Time Setup.	Refer to section 5.2.5 in the User Manual
U004	Test wire ended (during the One-Time Setup) Displayed only when using the Robomow App.	No action is required.
U018	Operation time is shorter than expected	Battery run time is too short. Replace Battery.

Display	Message / Description	Action Required
U024	Keep charging if not used. Displayed only if the mower is disconnected from a Charging Adaptor.	It is recommended to keep the mower connected to the Power Supply when not in use.
U025	Switch Off before lifting	It is required to switch Off the System Switch before lifting and carrying the mower.
U029	Change the wires in plot connector Displayed during the One-Time Setup.	Swap the wires at the plot connector. Refer to section 5.2.4 in the User Manual.
U032	Switch on the System Switch. Displayed if the mower is connected to charging, but the System Switch is 'Off'.	Switch the System Switch to 'On'.
U041	Press the STOP button at Sub-Zone entry. Displayed only when using the Robomow App to add a Sub-Zone.	Press STOP at the point you want the mower to start mowing the Sub-Zone.
U042	Learning edge distance. Displayed only when using the Robomow App.	The mower learns the distance of the Perimeter Wire in a Separated Zone. Press STOP to learn he distance.
U043	Going to Sub-Zone entry point. Displayed only when using the Robomow App.	Press OK to continue the process of adding a Sub-Zone.
U044	Place the mower in the Base Station. Displayed only when using the Robomow App.	Place the mower in the Base Station before starting the process of adding a Sub-Zone.
U051	Reposition the Base Station position. Displayed during the One-Time Setup.	Refer to section 5.2.4 in the User Manual.
U052	Adjust Wire	Refer to section 5.2.5 in the User Manual.
U062	An alarm will soon be activated.	This message warns you to enter the PIN code before the Anti-Theft alarm will sound.
U064	The Searching Base Station operation cannot be performed	When choosing the 'Home' button in a zone without a Base Station.
U086	Waiting for the signal… Robomow has stopped the operation. It does not detect a signal.	Check the power to the Power Box. There may be an electrical power interruption. There is no need to do anything. Robomow will renew operation as soon as the power is back on.
U087	Mow motor overheat, Cooling… The mowing motor has been working under a severe load for too long.	No need for action – Robomow will renew automatically the operation, as the mowing motor will cool down.
U088	Drive motor overheat, Cooling… The drive motors have been working under a severe load for too long.	No need to do anything. Robomow will renew the operation automatically as soon as the drive motor will cool down.

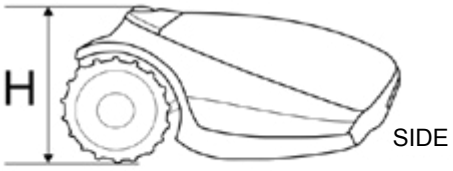
9.4 Fault Symptom

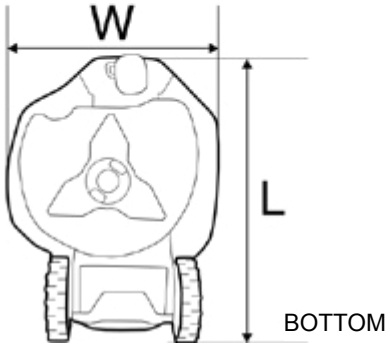
The next table will give details and possible causes of other faults, that do not provide error codes. If a fault cannot be dealt with using these tables, please call your service provider.

Problem Encountered	Probable Cause/Event	Corrective Actions
Poor quality of mowing	- Dull blade	- Replace blade.
	- The grass is too high in relation to the set cutting height.	- It is recommended to cut less than a 1/3 of the green part of the grass. - Set the cutting height to a higher position and then successively lower. - If it is during a fast growing season – change the Interval (refer to Section 6.4.2 – P001).
	- The grass is wet and causes accumulation of grass clippings around the blade.	- For best cut, operate Robomow when the grass is dry. Do no to mow in the early morning hours. - Switch Off the Safety Switch and use heavy gloves to clean and remove the grass clippings.
Mower doesn't find the Base Station	- There is a Perimeter Island or a Narrow Passage that prevents the mower to complete its drive towards the Base Station in Near Wire Follow mode.	- Reduce the Near Wire Follow Distance in the Settings menu from the default 7.
Robomow is noisy and vibrates	- Damaged or unbalanced blade	- Check if the lawn is free from branches, stones or other objects that can damage the blade. - Replace the blade
Mower does not dock properly and sometimes misses the Base Station contacts	- Height differences between the lawn and the Base Station surface.	- Fill some ground to flatten the lawn to the Base Station to allow smooth entrance.
	- The wire underneath the Base Station is not tight and placed in the middle of the Station.	- Confirm the wire underneath the Base Station is straight, tight, and centered below the Base Station.
	- The Base Station is set up on a side slope.	- Move the Base Station to a relatively level ground.
	- The Base Station is placed too close to the corner of the lawn	- Move the Base Station so it is not within 3 meters from a corner.
Uneven mowing results	- The time between operations is too long because of long inactive time windows.	- Minimize the Inactive Time windows to allow Robomow to complete the Mowing Cycle faster and to achieve even mowing results.
	- Grass is growing very fast.	- If it is during a fast growing season – change the Interval (refer to Section 6.4.2 – P001).
	- The shape of the lawn is complicated (Narrow Passages, obstacle and islands).	- In a complicated lawn more time is required for the lawn to achieve better mowing results. - Increase the Intensity (refer to Section 4.3.2.1).
	- The set area is smaller than the actual lawn size.	- Increase the zone area (refer to Section 4.3.3 Edit an existing Zone).
Robomow operates during Inactive Time.	- Wrong clock time is set in the mower.	- Verify that the time on the mower is set correctly. - Set the time (refer to Section 4.4.4).
		- Reset the Inactive Time (refer to Section 4.3.1).
Cut wire indicator is flashing on Power Box	- The Extension Cable is disconnected or damaged between Power Box and the Base Station.	- Confirm the Extension Cable is plugged in and wire leads are firmly attached.
	- Perimeter Wire is cut.	- Walk along Perimeter Wire. - Look for cuts or breaks in the wire. - Repair with Robomow wire splice connectors.
The poor connection indicator is flashing on Power Box	- Poor connections	- Check and repair all loose, poor, or corroded connections.
	- Twisted cables, or a screw terminal which is insulated with insulation tape is not a satisfactory splice. - Soil moisture causes the conductors to oxidize.	- Use the connectors supplied in the box. They are waterproof and give a reliable electrical connection.

10. Product Specification

	RC 302	RC 304	RC 306
Max Lawn Size	200 m^2	400 m^2	600 m^2
Base Station	Available as Accessory	Included	Included
Robot Dimensions	63 x 46 x 21 cm	63 x 46 x 21 cm	63 x 46 x 21 cm
Package Dimensions	80 x 54 x 33 cm	80 x 54 x 33 cm	80 x 54 x 33 cm
Robot Weight	10.3 kg	10.3 kg	10.3 kg
Package Weight	22 kg	22 kg	22 kg
Cutting Width	28 cm	28 cm	28 cm
Cutting Height	15-60 mm	15-60 mm	15-60 mm
Mowing Power	200 Watts	200 Watts	200 Watts
Mowing Motors	DC Brush	DC Brush	DC Brush
Noise Level	High Power: 68 dB measured (Guaranteed 70 dB) The noise t the operator's ears less than 70 dB		
Battery Type	26V Lithium (LiFePO4)	26V Lithium (LiFePO4)	26V Lithium (LiFePO4)
Robot Part No.	PRD7002A	PRD7004A	PRD7006A





Anti-Theft PIN Code

Write down your 4-digit Anti-Theft PIN code.
Return here, if you ever forget the code.

_____ _____ _____ _____

Robomow Serial Number

_____